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COMMUNICATIONS.

PULMONARY CONSUMPTION AMONG FIREMEN.

BY THOMAS J. MAYS, M. D.,

PROFESSOR OF DISEASES OF THE CHEST IN THE PHILADELPHIA POLYCLINIC.

Much of the attention that has been devoted to the etiology of consumption has been directed to its prevalence among those who are engaged in in-door occupations, or among those who spend their lives in closed institutions, like convents, monasteries, prisons, etc.; but so far as my knowledge extends no interest, or very little, has been taken in investigating the death-rate of this disease among those who follow open-air pursuits. Under the former conditions the mortality of the disease is invariably high, and during the last few years this fact afforded the principal clinical argument in favor of the contagious nature of consumption. That this mode of reasoning is illusive, and that a high death-rate from consumption is also present under opposite circumstances will appear from the following investigation which was undertaken with a view of showing the death-rate of phthisis among those who are engaged in extinguishing fires in our large cities.

In the beginning of last August I sent a circular to each of the fire departments of the principal American cities containing the following questions: Duration of observation? Are any but able-bodied men admitted into your service? Number of deaths from all causes? Number of deaths from consumption? Number of deaths from accidents? Number of deaths from pneumonia, pleurisy, bronchitis, asthma, and from other diseases? Replies were received from Philadelphia, New York, Boston, Chicago, St. Louis, Buffalo, San Francisco, Washington, D. C., Cleveland and Baltimore; and to the various officials who kindly furnished them, and whose names appear in the statistical table on page 358, I desire to return my warmest thanks.

In the aggregate these returns show 434 deaths from all causes, 144, or 31.04 per cent., of which were caused by consumption; 38, or 8.74 per cent., by other diseases of the lungs; 122, or 28.11 per cent., by other diseases than consumption and those of the lungs; and 130, or 29.95 per cent., by accidents. One of the most astonishing disclosures of this investigation is that, in spite of the hazardous nature of the fireman's occupation, his chances to die from pulmonary consumption should be greater than to be killed by accident. This, however, fails to give a correct estimate of the proneness of the fireman to fall a victim to the disease under consideration. For the above statistics show that the older fire departments, as a rule, show the heaviest mortality from consumption, evidently because the special causes which bring about consumption among these people become more active after the first few years' service; hence by deducting the death-rate of the departments of Boston and Washington, neither of which has a recorded observation of more than 18 months, the death-rate from consumption among the other departments rises to 33.73 per cent. of all the causes of death.

But even this does not give a true idea of the fireman's liability to pulmonary diseases; nor, perhaps, of his whole liability to consumption, for it is quite certain that this disease makes a frequent beginning in pneumonia or bronchitis among these men. The total number of deaths from pneumonia are 38, but there is good reason for believing that at least some of these died from consumption. From an inquiry into the length of sickness of those who are reported as having died from pneumonia in the Philadelphia

department I should say that none died of acute pneumonia. But even if this suspicion is not well founded, in any case it still remains a fact that 40 per cent. of the causes of death to which the fireman is liable come through respiratory diseases.

Now the death-rate from consumption among the general adult population is 27.29 per cent. of the total deaths; and when the death-rate from this disease among firemen is compared with this standard the latter would exceed the former only by about six and a half per cent.—a very small difference indeed.

But from the following account it will be made manifest that this estimate falls far short of the true relative mortality of this disease among this class of men. For in reply to the question whether any but able-bodied men are admitted, the departments of Philadelphia, New York, Boston, Chicago, St. Louis, Cleveland and Washington stated *no*, and gave the additional information that every man was compelled to undergo a medical examination. Those of Buffalo, San Francisco and Baltimore answered the question in the same negative way, but said nothing in regard to medical examinations. It is fair to presume, however, that since the custom of medical examinations is so general in other cities, the men of the latter also receive medical inspection before admission.

In some of the cities the applicant must,

TABLE OF THE MORTALITY RETURNS FROM THE FIRE DEPARTMENTS OF TEN AMERICAN CITIES

Name of Fire Department.	Duration of Observation.*		Number of Deaths from							Total Number of Deaths.	Percentage of Deaths from Consumption.	Name of Observer.
	Number of Years.	Dates.	Pulmonary Consumption.	Pneumonia.	Bronchitis.	Asthma.	Pleurisy.	Other Diseases.	Accidents.			
Philadelphia .	19	1871 to 1890	33	3	0	1	0	21	25	83	39.75	John T. Watson, Clerk.
New York . . .	15	1865 to 1890	60	18	0	0	3	56	58	195	30.76	Thomas H. Bonner, Chief.
Boston	1½	Dec. 26, 1887 to July 11, 1889	2	1	0	0	0	13	5	21	9.52	L. P. Webber, Chief.
Chicago	5	1884 to 1889	4	1	1	0	0	8	10	24	16.66	D. J. Smuice, Marshal.
St. Louis . . .	5	1885 to 1890	9	0	0	0	0	8	8	25	36.00	John Lindsay, Chief.
Buffalo	10	1880 to 1890	5	0	0	0	0	2	5	12	41.66	E. O. Van Broise, Secretary.
San Francisco .	4	1886 to 1890	9	4	1	2	0	5	2	23	39.19	David Scannell, Chief.
Cleveland . . .	3	1887 to 1890	1	0	0	0	0	2	2	5	20.00	Dr. T. L. Travis, Surgeon.
Baltimore . . .	15	1874 to 1889	21	3	0	0	0	7	15	46	45.86	John H. Hennick, Chief.
Washington, D. C.	1	1889 to 1890	0	0	0	0	0	0	0	0		Dr. S. A. McKim, Surgeon.

* This implies the time during which health records were preserved of the departments.

under oath, declare whether he has any pernicious habits and whether any near relatives are, or have been, "afflicted with consumption, raising of blood, or with pulmonary or scrofulous disease;" and the medical examinations are so rigid that nearly half of those who apply are rejected. Now from all this it becomes very evident that the firemen at the time of entrance differ very much from the general population in so far as soundness of body is concerned. The former are a healthy, selected class of men, while the latter are a promiscuous group amidst whom are found all kinds of diseases. Indeed, from all I can learn, it appears that the test to which firemen are subjected is no less severe than that which is applied to life-insurance risks, and that these two classes of men therefore occupy very much the same vantage ground in relation to health at the beginning of their respective careers. Let us then compare the mortality from consumption of the one with the other.

According to the Mutual Life Insurance Company of New York (*Mortuary Experience of the Mutual Life Insurance Company of New York from 1843 to 1874*, published 1875, p. 12), consumption caused 17.61 per cent. of the total mortality of 5,224 insured lives, showing that this falls short 16.12 per cent. of the firemen's death-rate from this disease. Now the average mortality from consumption among the general population between the ages of 20 and 70, as founded on the statistics of a number of large American cities, is 27.29 per cent., which exceeds the death-rate among the insured 9.68 per cent. Basing our estimates on the mortality of insured lives, we add 9.68 per cent. to 16.12 per cent., and this product, 25.80 per cent., represents the liability of the firemen to consumption over and above that of the general population. If we now add the latter to the death-rate of the general population we get 53.09 per cent., which represents the relative death-rate of firemen from consumption. In other words, if the whole adult population were turned into firemen 53.09 per cent. of all their deaths would be caused by consumption.

A little more than a year ago Dr. George Cornet, of Berlin, investigated the death-rate from consumption among the nursing members of the Catholic convents and monasteries in Prussia, and found that this disease causes 62.88 per cent. of all their deaths (*Zeitschrift für Hygiene*, vol. vi, p. 65). Ever since these results were published they have been regarded as incontrovertible proof of the contagiousness of consumption, since it appears that these nurses are largely engaged in caring for those who are afflicted with this disease. That this conclusion is entirely unwarranted is apparent from the following considerations: (1) The investigation disclosed nothing new; for almost five years before it had been shown by Baer (*Ueber das Vorkommen von Phthisis in den Gefängnissen*, 1884) that the death-rate from consumption ranged from 64 to 90.9 per cent. in closed institutions, that is, among the inmates of German prisons. (2) Notwithstanding Dr. Baer's statistics, Dr. Cornet's paper would be a valuable contribution to medicine if he had made a comparative examination of the death-rate of the inmates of these institutions who nurse, and of those who teach. By this he would have demonstrated whether those exposed (nurses) are more liable to this disease than those not so exposed (teachers). This would probably have required but little more work, and it is very much to be regretted that it was not attempted. (3) A point which militates forcibly against the idea that consumption is communicated through personal contact in closed institutions is also brought out by Dr. Baer's statistics. For he shows that prisoners who suffer solitary confinement are more vulnerable to the disease by 20 per cent. than those who are allowed to associate with each other.

Now when this evidence is connected with that which developed itself in this investigation, the whole points very strongly to the non-contagious nature of pulmonary consumption. In other words, it leads one to conclude that the origin and existence of this disease is not dependent on being communicated from the consumptive to the well. It is true that the relative death-rate among firemen is only 53.09 per cent.; and therefore 9.79 per cent. less than that among the nurses in convents and in monasteries, who are believed by Dr. Cornet to have contracted the disease from those whom they were nursing, yet this death-rate of the firemen has a far greater significance than appears on the surface. Here we have a class of men who are not confined to sunless and poorly ventilated buildings, who spend probably two-thirds of the twenty-four hours in the open air, who do not come in contact with tubercle bacilli, or the expectoration of consumptives, except by chance; and who, irrespective of their occupation, are not sur-

rounded by any special prejudicial influence to their health; and yet in spite of all these conditions; even after, so far as this is possible, all the personal and family factors which are known to induce the disease are eliminated, consumption still causes one-third of their deaths; and when this death-rate is compared with that of the general population it rises to more than fifty per cent.—truly a most frightful mortality from a single disease under such circumstances.

Now what is the cause of the large number of deaths from consumption among firemen? In answering this question I think it may be stated without hesitation, that, if one thing is more true than another, it is that consumption cannot possibly be dependent on a single specific cause. He who carefully watches the different steps in its development must feel that it arises only when and where the bodily energies are sapped and exhausted, regardless of the absence or presence of exposure to a specific germ. Hence any cause which is capable of destroying the vigor and vitality of the body is also a potential cause of pulmonary consumption. So far as I am able to judge, there is no class of men who are more open to enervating and depressing physical influences, or who suffer greater deprivations of rest and sleep than the firemen of our large cities. Liable to be called out at any time, their life is in great part one of perpetual excitement. The sudden transition from a warm room to active duty on a cold winter's night—sometimes the urgency being so great that they are compelled to finish their toilet *en route* to a fire; the daring, the excessive and almost superhuman exertion demanded in battling with the flames; the extreme oscillations of temperature to which their bodies are subjected—bathed in perspiration at one moment and drenched and chilled by an icy stream of water the next; the necessity during emergencies of wearing and even sleeping in wet clothing from one fire to another, are burdens which no human constitution can long successfully withstand, and are unquestionably some of the most prominent causes which undermine the health of these self-sacrificing men and make them so vulnerable to the disease under consideration.

—The cholera bacillus is now claimed to be destroyed in the healthy stomach before it gets a chance at propagation in the intestines.

THE USE OF RHUS TOXICODENDRON.[1]

BY JOHN AULDE, M. D.,

PHILADELPHIA, PA.

Rhus toxicodendron is a remedy of great practical utility in the treatment of many grave diseases, and, although it has been before the medical profession for nearly a century, it has not been very largely employed by regular physicians. It is a drug whose peculiar action is not well understood, the effects being so marked from the use of comparatively small doses that many physicians regard the reports following its exhibition as incredible. It is also a remedy claimed as the special property of medical practitioners who style themselves homœopaths, and is regarded by them as supplying one of the best illustrations of the truth of their dogma, "*Similia similibus curantur.*" The objects to be attained in the study of this drug may be summarized as follows: A better understanding of the therapeutical indications for its employment and a theory to account for the results obtained as contrasted with the theory of *similia*.

I have published two papers upon rhus toxicodendron, the first being a short letter in the *Medical News*, April 20, 1889, in which I recorded a number of cases successfully treated by the exhibition of rhus; the second was a report of a collective investigation in the *Therapeutic Gazette*, October, 1889. I have used this remedy for several years past, and quite a number of others have used it at my suggestion in the treatment of different diseases, but I have never claimed the original discovery of the valuable properties of the drug. In my first-published paper, I referred to its use in 1798, eight years before Samuel Hahnemann invented the name of homœopathy, and mentioned also that it was official in the British Pharmacopœia in 1836; but I was not then aware that it had been studied by Piffard, of New York. Since the publication of these papers I have received communications from gentlemen who have used it for other than rheumatic affections, for which I especially recommended it. The only claim I put forward is, that through my influence its value has been brought to

[1] Read before the Montgomery County, Pennsylvania, Medical Society, September 24, 1890.

the attention of quite a number of physicians, and at the same time new uses have been found for it.

The principle upon which minute doses of medicines act seem to me to be best explained by what may be called Cellular Therapy. I have in previous publications foreshadowed my views on this topic, but only recently have these ideas been sufficiently crystallized to warrant their presentation to the profession in compact form. These notions have been somewhat faintly outlined in discussing "Small Doses" (MEDICAL AND SURGICAL REPORTER, December 3, 1887, June 30, 1888, and July 28, 1888), a little over two years ago. The last two papers were devoted to a discussion of the therapeutic considerations connected with the administration of small doses, and included some remarks upon electricity, nux vomica and nitroglycerin. From the last of these I quote the following: "A few words should be added here as to the value of these generalizations and the bearing which they may have in the elucidation of the theory of the actual value of small doses in the treatment of disease. As to strychnine, for example, its value is well recognized, but the method by which we arrive at results is not so well understood, the deductions of experimental physiologists being somewhat contradictory and misleading. Its applications (effects), are accounted for on the basis of its physio-pathological action or, to be more plain, its physiological action in the presence of pathological changes involving, we may presume, certain modifications of the cell-action. Whether the tissues are normal or abnormal, we always have to do with cell-action, and when a medicament is added we have, as a resultant, the cell-action and the drug-action; and we may assume that when the latter is properly applied, the drug-action is in the nature of a complementary action to that of the cell. It is certainly not 'substitutive action,' nor does the expression, 'elective action,' sufficiently cover the ground; while in the light of these investigations, both homœopathy and dosimetry are altogether irrelevant expressions."

Going farther than this, we see that the pathological changes following the exhibition of lethal doses may be interpreted from a therapeutical standpoint, as in the case of mercuric bichloride, rhus toxicodendron and arsenite of copper, all of which are known to be exceptionally active poisons. Large doses of the bichloride, acting upon the cells of the intestinal mucous membrane as an irritant (stimulant), set up inflammatory processes, which so closely resemble the pathological changes occurring in diphtheria, that no difference between the two can be distinguished under the microscope. It is reasonable, therefore, to assume that the bichloride may be used with proper caution in the case of pathological changes affecting mucous structures, because of its known stimulant action upon the cells affected. The absorption of poisonous products in this case is prevented by the increased resistance of the cells upon the same principle as the normal cells prevent the absorption of the poisons naturally occurring in the intestinal tract even in health. The medicament merely increases the resistance of the organism by fortifying and strengthening the normal functions of the affected cells. The danger to be apprehended from the use of this remedy is ptyalism; but, in addition, there are dangers which may properly be classed as intermediate. For example, the amount and frequency of the dose may lead to the disorganization of the cells, when they are no longer capable of acting in the capacity of scavengers, and, although nature is conservative, disease gains the upper hand. The minimum dose, repeated at short intervals, is therefore of prime necessity, as by this method the cells are constantly bathed in a fluid charged with the medicament, while over-stimulation and the consequent destruction or arrest of the cell-function are avoided.

In the case of rhus, instead of the buccal mucous membrane bearing the brunt of lethal doses, its effects are shown in the form of marked inflammatory changes in the integument, an illustration of the remote action of the drug. The direct action is upon the cells of the intestinal tract, the remote effect being manifested in the subsequent hyperemia and retrograde changes taking place in the cells of the integument. These effects have been referred to as the specific action of the drug, and it is the toxicological effect of such action that we wish to avoid in the treatment of disease. The knowledge thus acquired, while valuable from a toxicological point of view, it will readily be seen, is not of equal value as a lesson in therapeutics, unless rightly interpreted.

In the case of arsenite of copper, we have a most fitting illustration of cell-activity in

the treatment of various disorders of the intestinal tract. It is closely related chemically to Paris green, and as a therapeutic agent is destined to occupy an important position in the medicine of the future. The exhibition of minute doses is attended with marvellous results, in all cases and at all seasons of the year, in every climate. That it is antiseptic cannot for a moment be doubted, but it is also an important alterative, producing effects through influences which, except upon the basis of cellular therapy, we are unable to understand or explain. Without any undue stretch of the imagination, catalytic properties may be ascribed to it, as through its administration a series of changes are started which sooner or later manifest themselves by effects which are more or less perceptible.

In the treatment of typhoid fever, I have found it superior to any and all other remedies, when used solely with a view to maintain a healthy condition of the intestinal canal, and the only scientific basis which can be offered for this beneficent action rests upon the theory of cellular therapy. My ideas on this subject have been confirmed by the opinion of Prof. Dr. Hugo Schultz, of Greifswald, Germany, my friend and translator, who has arrived independently at a similar conclusion. In the course of a private communication he says, "It is out of the question to suppose the cupric arsenite exerts any germicidal influence when given in the doses you advise. The beneficial action of the drug, however, goes far to prove the possibility of a 'cellular therapy,' with the necessary consequence of a pre-existing cellular pathological condition."

It will be evident, therefore, to the most superficial observer, that cellular therapy is entitled to more than a passing notice, and I have confidence that it will ultimately occupy an important place in completing the chain of evidence which shall advance the art of medicine until it occupies a position on a level with surgery, as seen in the last decade of the nineteenth century.

In concluding my reference to the subject of cellular therapy, I will anticipate some objections which may be offered. It may be asked why these cells are thus affected by different medicaments, and why certain drugs are indicated in particular diseases. These questions cannot be answered. The physiologist cannot tell why a ray of light impinging upon the retina produces a mental picture on the brain, nor explain the process by which sound is conveyed to the brain; and the therapeutist meets also obstacles when he tries to explain the action of drugs. The entire science of physiology is erected upon the function of the cell as a basis, and this remains one of the most profound secrets of nature. Disease, in its incipiency, is a derangement of function beginning with the cell; all medicines, as a rule, are poisons, and as such produce or develop effects in the nature of force when introduced into the economy. The aim of the physician is to determine the range and extent of that power, and at the same time to locate as nearly as possible the particular cells which are modified, and the manner in which they are affected by this force.

Pharmacology.—The pharmacology of any drug includes a study of its physiological as well as its toxicological effects, given in small, medium and lethal doses. In order to obtain a correct knowledge of the properties of rhus toxicodendron, I may mention some points connected with its preparation, which belongs to the department of pharmacy. Many valuable medicines are ruined in the course of preparation, and unfortunately rhus toxicodendron forms no exception to this rule.

The only reliable form of preparation is the tincture made from the fresh leaves, which should be gathered during the period of efflorescence. It is said that, as far as practicable, the leaves should be selected from among plants growing in the shade; in case this is found impracticable, they may be gathered before the sun strikes them in the early morning. The tincture is made according to the directions of the *U. S. Pharmacopœia* for the manufacture of fresh herb tinctures—fifty parts of the drug to one hundred parts of alcohol; after thorough maceration, the liquid is allowed to stand for the period of fourteen days, when it is subjected to percolation, and is then ready for use. The active principle, toxicodendric acid, is an exceedingly volatile substance, and it is reasonable to suppose that preparations made from the dried leaves are practically inert. My observations with fluid extracts prepared in this manner warrant the statement that they are not reliable; and I therefore desire to emphasize the need for procuring a reliable product. Dr. J. W. Keath, of Schaefferstown, Pa., wrote me some time ago that he had used rhus in all the classes of cases in which I had recom-

mended it, in both large and small doses, and had failed absolutely to notice any effect whatever. I at once made arrangements to have him supplied with a reliable product, and the treatment was repeated with the result that not a single failure occurred.

The dose of the tincture ordinarily should not exceed one-half drop three times daily; if the diagnosis is correct, and the results are unsatisfactory, the dose should be diminished. For convenience the tincture may be prepared in the strength of one part of the tincture to nine parts of diluted alcohol. Each five drops of this solution carries just one-half drop of the medicine. In patients who are susceptible to the action of the crude drug, that is, those easily poisoned, it will be advisable to begin treatment with a single drop of the ten per cent. solution, which may be diluted with a little water and taken three times daily. In typhoid fever, the dose should be even smaller, but more frequent repetition is necessary.

As some present may have doubts concerning the possibility of so small a dose having any appreciable effect, I call your attention to some tablet triturates, each containing one one-hundredth of a drop of the tincture, and if you have the temerity to investigate the matter *in propriâ personâ*, take one of these tablets and allow it to dissolve in the mouth. There is no evidence superior to that afforded by one's own senses, and at the close of my paper we shall be glad to hear the results of the experiment.

Lethal doses are best antagonized by the exhibition of some preparation of lead, and you all know that lead water and laudanum are the standard remedies in the case of rhus poisoning. As an external remedy, no combination is superior to ordinary white-wash; it should be applied freely with a brush, and the patient instructed to avoid carrying the poison from one part of the body to another through the medium of the hands. To allay the irritation set up in the digestive tract, olive oil or some other bland oil may be freely swallowed.

Absorption takes place very rapidly, whether rhus toxicodendron is applied locally or taken internally, but it is said that cautiously chewing the twigs of rhus renders the person proof against poisoning from contact with the shrub. Elimination is effected through the usual channels, the effects being most marked in the skin and upon the urinary tract.

The general action, when taken in medicinal doses is that of a stimulant, acting upon the cerebral centres, as any of you may learn from taking the minute dose suggested. From small medicinal doses, I have never noticed any appreciable narcotic effect, although no doubt large dosage will show that it has decided narcotic properties. Dr. George Kirkpatrick, of La Harpe, Illinois, wrote me some time ago that he took by mistake a swallow of the tincture, and almost immediately afterwards, he took ten grains of sodium carbonate and a quantity of oil, and felt no bad effects until the second day, when he noticed that the scarf-skin was all peeling off. He suffered no serious inconvenience, however, from the accident. The form, manner and time of taking, are important factors in producing therapeutic effects. While in the case of chronic rheumatic affections half-drop doses three times daily are quite sufficient, typhoid fever and erysipelas require smaller doses given at more frequent intervals, at least as often as every hour during the day. The mixing of the plain tincture with water is contra-indicated, as a considerable portion of the active principle is thus destroyed; by using it in the form of a solution with diluted alcohol as suggested, this objection is removed, and each dose may be combined with a teaspoonful of water without injury, if not allowed to stand exposed too long.

The action of rhus upon the nervous system is somewhat peculiar; as, although it is not a narcotic in the proper sense, it possesses the property of allaying the irritability of the sensory nerves. This is shown in a very distinct manner in the case of chronic rheumatic affections, where the pain will be arrested sometimes in the course of a few hours. My impression is, that the effect in these cases furnishes an illustration of the influence of the cell-action. In sciatica, for example, the nerve-cells are bathed in a fluid containing the rheumatic poison, which is manifested by the sensation of pain; but as soon as the circulating fluid becomes charged with the active principle of rhus, elimination begins, and at the same time more or less stimulant action takes place in the cells affected, the result being that the pain ceases. The demonstration here offered finds an apparent counterpart when the eye becomes tired from gazing at some particular color, but as soon as an acceptable shade is presented to it a comfortable sensation of rest is experienced. For a long time it was be-

lieved that nothing but opium or some of its preparations were serviceable in this class of cases; lately, however, the analgesic properties of synthetic products have been discovered, and with the light furnished by the cell doctrine, the way is clear to the discovery of other drugs possessing certain peculiar properties. We shall then be in a position to understand the claims of the homœopaths in regard to the harmlessness of their medicines even when taken in large quantities, providing it is not the particular remedy which meets the inroads of the disease.

The effect of medicinal doses of rhus upon the circulation, the temperature and respiration is not marked. Upon the muscular system, during the progress of rheumatic changes, the effect is very manifest; but this action is undoubtedly through the mechanism of the nerve-cells. Thus, when a nerve-trunk is stimulated (irritated) by some foreign substance, electricity, strychnine, strophanthus, or even by a blow, its power over the muscle is arrested and, as has been pointed out by Poole, the muscle supplied by the nerve exercises its inherent property and contracts. In the case of lumbago, we are warranted in assuming that the pain may be due to a combination of circumstances brought about originally through the arrest of tissue-change, by which the blood is charged with a poison that suspends the function of the nerve-cells. As a consequence of this arrest of function there is increased muscular tension, manifested by pain on motion. It is in these cases that we have the practical illustration of the stimulant properties of rhus exhibited, by which the cell-function is promptly restored. The true explanation of this "cure" is not to be credited to homœopathy, but to antipathy.

In the early history of the use of rhus toxicodendron, it was recommended for the relief of paralysis; but it will be apparent from the foregoing that it does not correspond with strychnine in the treatment of this class of cases. The special forms of paralysis which it relieves are caused to disappear solely through the stimulant action upon the nerve-cells, and it is necessary to exercise care in the selection of cases for treatment with rhus toxicodendron.

Upon digestion the effect of rhus is most remarkable; and, from my experience with it in the treatment of disorders accompanied by derangements of the digestive functions, I am inclined to regard it as possessing properties allied to that of an antiseptic. It certainly has a decided detergent effect upon the blood, and persons taking it for the relief of rheumatic affections seem to experience marked improvement in digestion, the secretions being perceptibly increased. When introduced into the stomach, the eliminant action upon the cutaneous system is very noticeable. In the course of a few days, the complexion begins to show favorable changes, and with increased activity of the cutaneous envelope there is a correspondingly increased cerebral activity. I recall a case in which it was used for its influence upon the genito-urinary tract, when indigestion was a prominent symptom, with indications of approaching melancholia. Half-drop doses of the tincture, three times daily, changed the whole character of the disorder, and at the end of a week, indigestion, urethral irritation and melancholia had disappeared.

Therapeutical Applications.—A study of the physiological actions and the toxicological effects of a drug naturally indicates its therapeutical applications; and after what has been said of rhus toxicodendron, little need be added in pointing out the indications for its employment. I have already referred to an apparent antiseptic and alterative action which rhus seems to possess, especially in the case of rheumatic and intestinal disorders, and I desire to call your especial attention to its value in the treatment of all forms of chronic rheumatic affections. The only instances in which I have failed to obtain good results were those when the patients had become debilitated from insufficient or inappropriate food supply, and in the case of acute attacks engrafted upon a chronic disorder. The physician is frequently confronted with cases of rheumatic joint-affections, sciatica, pains in the shoulder, the ankle-joint, the ball of the foot, etc., where other medication has proved disappointing. In many of these cases rhus will prove effective, often relieving the pain within a day or two, and effecting a permanent cure. In wry-neck due to exposure, and in lumbago rhus will prove very valuable. Hemorrhoids, varicose veins and chronic cystitis are usually promptly relieved by the exhibition of this drug. Occasionally the close observer will be disposed to regard some local disturbance, such as ear-ache, sore throat, pain in the bladder or rectum, as one of the manifestations of a rheumatic tendency; and it will be found

on trial that rhus is not alone palliative, but produces permanent recovery. It is often of signal value in relieving paralyses accompanied by a rheumatic history, and, while I am not prepared to say that rhus would not be useful in the absence of the latter, I am disposed to regard the presence of this neurosis—including, of course, gouty and lithemic conditions—as the special indication for the employment of rhus.

In the treatment of erysipelas small doses seem to arrest the tendency of the eruption to spread while the fierce character of the inflammation is subdued and the temperature and pulse fall.

Rheumatic and gouty or lithemic tendencies are liable to manifest themselves during the progress of other diseases, acute and chronic. In typhoid fever, especially where it assumes the lingering form and is accompanied by what appear to be neuralgic pains, the exhibition of rhus will often cause these pains to disappear, and will produce a marked change in the course of the disease. I may add that this remedy will prove of great service in the treatment of some of the more common sequelæ of this disease, such as paralysis or sciatica and other pains of a neuralgic character, together with the usual depression of the organs of special sense.

In conclusion, I have but a word to offer relating to the use of rhus in the treatment of skin diseases. The chronic varieties respond most readily to this drug, and especially the scaly forms; but it is useful in all cases dependent upon an unhealthy condition of the digestive tract. As many of these affections are to a great extent due to the ingestion of improper food—too much starchy and saccharine material being eaten—it will be sufficient to say that these substances must be prohibited during the period of treatment, or but little benefit can be expected.

1910 Arch Street, Philadelphia.

INSOMNIA.

BY LUCIA REDDING THOMPSON,

PHILADELPHIA.

The latter half of the nineteenth century is characterized by a struggle for precedence, and with this ever increasing mental strain upon American men and women it is not surprising that we hear more and more of the widespread prevalence of insomnia, the etiology of which deserves the careful consideration of physicians.

We are, in many cases, unable to determine the causes of sleeplessness, since we do not know the cause of sleep. It is a cyclical event, the salient feature of which is the cessation of the automatic activity of the brain; it is the diastole of the central beat. The sleeping brain, in many respects, resembles a quiescent but still living ventricle. Both are at rest; both may be awakened by a stimulus, just as a single prick will awaken a ventricle which has been motionless; so a loud noise will awaken a man from sleep into a long day of wakefulness. We are not at present in a condition to trace out the events which culminate in this inactivity of the cerebral structures; nor can we make dogmatic statements concerning the nature of the molecular changes which determine this rhythmic rise and fall of cerebral irritability.

It has been said that during sleep the brain is anemic. If we admit this, can we consider it a subsidiary event, rather than a primary cause?

The fact that the products of protoplasmic activity obstruct such activity has suggested the idea that the presence of the products of nervous metabolism is the cause of sleep. If this accumulation were the cause, why should we ever have the hope of waking? This alternation of sleeping and waking or the ancient sequence of nights and days, is but a manifestation of all bodily periodicity. Within the day we have the constantly separated cycle of the cardiac shuttle, which must keep at its work, throughout the whole web of the body's life, and cease only at death.

Insomnia may be looked upon as a symptom, directing our attention to some condition which may shade off into disease. It is frequently a premonitory symptom of organic mental disease, which is not relieved by removal of its cause.

It is seen in those who have experienced excessive bodily fatigue. Persistent sleeplessness seen in *mania à potu*, and in those struggling against the opium habit, is familiar. The excessive use of coffee, tea and tobacco must be numbered among the numerous etiological factors of insomnia.

The treatment of insomnia is a matter of difficulty. Let us suppose that care and anxiety has been the cause; the removal of such cares becomes a difficult problem to

the physician. If due to that excessive exercise of emotions, or that condition characterized by a partial or complete suspension of all inhibitory influences—hysteria—its treatment becomes a still more difficult problem. The routine treatment is familiar, but he is a wise physician who abandons all thought of routine treatment and devotes himself to careful consideration of the various points in each case.

Accepting the idea that this functional inactivity is favored by a condition of anemia, we should diminish the circulation in the brain as much as possible, by directing the blood to the less noble organs of the abdomen. Warmth to the abdomen favors dilatation of those arteries which supply the intestinal tract, and consequent cerebral anemia. A large poultice, or a wet compress, consisting of linen or flannel wrung out of warm or hot water covered with oiled-silk, with a dry flannel placed above it, is useful. Warmth to interior of stomach has a similar action. Thus a glass of warm milk is favorable to sleep. The fact that this condition is unknown among savage races should serve as an important indication. This condition is so frequently seen in those who spend their lives in continual excitement: first to attain a happiness never found; then to escape a misery but too surely found. Thus moral measures may become more efficacious than all the remedies of the pharmacopœia. All constitutional conditions such as dyspnœa, cough, pain, palpitation should be relieved by appropriate treatment. Massage and electricity intelligently used are of service. Narcotics should not be used. The idea of relieving pain has descended to us from Hippocrates; to secure the desired sleep we think at once of a hypnotic or narcotic. We should never forget the long train of evils which may follow; the possibility of the formation of a habit which may render our patient a physical and moral wreck. These powerful drugs should be reserved for those in whom insomnia is secondary to pain, cough, etc., while we choose rather moral, hygienic, dietetic and physical measures.

—The northernmost pharmacy in the world, compared to which those in Iceland are situated in summer seas, has temporarily ceased to exist. It was the Apotheke at Hammerfest, the Norway town on the Arctic Sea, and the fire which consumed that town last month consumed it.

ACCIDENTALLY AMPUTATED FINGER RESTORED.

BY J. M. ANDERS, M. D.,

PROFESSOR OF HYGIENE AND CLINICAL MEDICINE, MEDICO-CHIRURGICAL COLLEGE, PHILADELPHIA.

On April 9 I was called to see a girl, four years old, whose mother informed me that the child's forefinger had been jammed between two heavy doors while one of them was being violently closed by an older sister. This accident resulted in severing the finger at a point on the distal side of and near to the last inter-phalangeal articulation. When I arrived, one hour and ten minutes after the time of the occurrence of the accident, I found the bone (the last phalanx) protruding about one-quarter inch beyond the soft parts, though looking well and its continuity unbroken. The separated end, consisting of soft structures and the nail, had been preserved, with the nail—root and all—*in situ*. It had been considerably contused, though retaining nearly its normal form, and it was quite cool. Although it was a great question whether union should be obtained if the missing end of the finger were replaced, I at once decided to make the attempt. It was placed in a warm bichloride solution, strength, 1 in 2,000, for a few minutes, and then carefully adjusted to the finger from which it had been severed, applying simply two pieces of adhesive plaster to keep it in position. Iodoform, bicoloride gauze, a straight splint for the whole hand and a roller bandage completed the dressing. At the end of four days the dressing was removed, excepting the narrow strips of plaster, which were allowed to remain for the reasons that there was no pus visible and the tip looked quite as well as it did when it had been replaced. The same dressing was re-applied and the whole was left undisturbed for ten days. On April 15 the entire dressing was removed and, to my surprise, primary adhesion, though perhaps feeble, had taken place everywhere, excepting for about one-half of the width of the finger on its palmar aspect and towards the inner side, where there was found a small amount of pus, preventing union. The dressing was now renewed daily, the fragments becoming gradually firmly united. At the seat of abscess a little pus continued to form for about three weeks, healing of the wound here taking place by granulation, to the depth of not more than one-eighth inch, however.

While the reparative process was going on, the nail continued its normal rate of growth, apparently, and in the most natural direction. At the end of four weeks or about the time union was completed, there occurred an exfoliation of a dense, almost horny, layer of about the thickness of true derm, over that portion of the finger end lying just beyond the point corresponding to the seat of the small abscess. This occurred twice, and, to my mind, served to show that the extremity of the tip in this vicinity had not been well enough supplied with nutrient material, owing to delayed union at the point mentioned above. As was to be expected, this peeling off gave the finger tip a somewhat shrunken appearance over the same area. On the whole the result was highly satisfactory.

The favorable termination in this case serves to point out how great the physiological activity of the healthy child's tissues, on the one hand, and the all-important fact that the surgeon should boldly attempt to save all damaged structures, especially among children, on the other hand. My chief reason for reporting this case is that I had observed on several occasions fingers sacrificed, on account of similar injuries, by most excellent surgeons.

1637 North Broad Street.

HOSPITAL NOTES.

NEW YORK POST-GRADUATE MEDICAL SCHOOL.

SERVICE OF DR. ROBERT W. TAYLOR.

Lupus Erythematosus.

The first patient, who was a single woman, twenty-four years old, having a family history which was negative as regarded tuberculosis, cancer, syphilis and scrofula, presented herself with a lesion on the face, which she said was first noticed about three years ago as a small pimple near the middle of the nose. It had spread symmetrically over the cheeks down to the mouth, involving both lips, and upwards to the root of the nose. It had also spread to the zygoma on each side, and was then on the point of spreading to the forehead. Its outline therefore resembled that of a butterfly or a bat. Although the disease had produced great disfigurement of the face, she had not placed herself under medical treatment until about one year ago. Syphilis being excluded in this case, Dr. Taylor said there was only one other condition answering this description, and that was lupus erythematosus. The name "lupus" was a fanciful one; but in view of the great ravages of the disease in this case, the term "wolf" did not seem very inappropriate, and it had been so long used in dermatology, that it seemed necessary to retain it. The course of the disease over the face was marked by a delicately thin, glossy, pinkish cicatricial tissue; and the atrophic changes caused by the disease were shown in the marked thinning of the alæ nasæ, and the stenosis of the nasal apertures. The disease still lingered in its active condition about the nasal sulcus and upon the cheeks. A better picture of the disease could hardly be presented, except it were one of much shorter duration. Lupus also occurred, although much less frequently, upon the hands and arms, and it might consist of one patch, or of several. The disease began as a hyperemia with cell changes about the subaceous follicles, causing disc-shaped tubercular patches which, on close examination, showed the subaceous follicles plugged up with epithelial débris and fat cells. The books laid much stress upon this "plugged follicle symptom;" but, as a matter of fact, it was not always present. The patches subsequently underwent atrophy; and in the present case, it was quite difficult to say how much was due to the natural involution of the disease, and how much to treatment. The treatment involved the use of more or less destructive applications. Sometimes the margins of the patches were scarified, as had been done in this case, and it was good treatment. But the lecturer recommended that this patient be treated by the application first of pure carbolic acid, and then of collodion, except for the parts near the angle of the eye, where collodion would be much too binding. In this locality, after removing the scales, paint the part with liquor potassæ, and then apply equal parts of zinc and mercurial ointments. The persistent use of these applications for a considerable time, would in all probability bring about a cure. Many observers, particularly in the past, had claimed that lupus erythematosus was a diathetic disease, and was the offspring of scrofula; but there was no clinical evidence to support this view. Of course, if any

underlying dyscrasia were detected, it should be treated on general principles.

Syphiloderm and Pediculosis.

Another man, who gave a clear history of syphilis, presented himself on account of a general itching eruption on the body, with ulcerations on the thighs, which had first been noticed about four weeks before. On one side of the thorax was an infiltrated patch which had undergone involution in the centre, leaving a cicatricial and pigmented patch surrounded by a constantly increasing zone of infiltration. It was an anomalous form of syphilitic infiltration. On the other side of the thorax was an ecthymatous ulcerated patch, and another ulcerated surface on the right thigh. In addition to these lesions, there were found all over the body and limbs, numerous papules, irregular in size and distribution, and often covered with blood crusts. This eruption made it evident that the itching of which the patient complained was independent of the syphilitic lesions already described, and was due to pediculosis corporis. Such a coincidence might easily mislead an inexperienced observer in making a diagnosis in a case where the syphilitic lesions were not easily recognized. Especially might this occur after the pediculosis had lasted for some time, for prolonged scratching caused the papules to become larger and the skin darker from a deposit of pigment. It was important also to clearly differentiate this eruption from scabies. Scabies spread up the arm and down on to the body to the buttocks, sparing the back; but in pediculosis the eruption followed the habitat of the insect, *i. e.*, occupying the shoulders and sides of the body where the clothes were directly in contact with the skin.

In pediculosis, the insect kept to the clothes; hence, a hot bath and clean clothes would effect a cure of this part of the case. The ulcerated spots already referred to were indicative of a low grade of inflammation occurring in an old syphilitic subject, probably as the result of the irritation caused by scratching. The treatment, therefore, should be directed towards eradicating the syphilitic virus from the system, and to that end, the patient should receive a course of mercurial inunctions, and about fifteen grains of iodide of potassium with citrate of iron and quinine three times a day, gradually increasing the dose of mercury and iodide until the syphilitic diathesis was cured.

Acne Rosacea.

The attention of the class was then directed to the case of a man, twenty-seven years old, who stated that he had been a pretty constant drinker of beer, and that about nineteen months ago he had had "seventeen chancres on the penis." Three years ago, some smooth red blotches formed on the face, and during the last six weeks they had developed numerous warty excrescences. Dr. Taylor said that the "chancres" the patient spoke of, were either soft chancres, or more probably herpetic vesicles; and the eruption which developed on the nose, was rosacea. This disease usually began as a pinkish blush of the skin, with an increase of the subcutaneous tissue and a hyperemia of the sebaceous follicles, resulting in some thickening of the skin and an extremely patulous condition of the mouths of these follicles—sometimes large enough to admit the insertion of a pin. After the skin had become more thickened, enlarged capillaries might be seen ramifying over the affected part; and if the lesion were allowed to proceed, any amount of deformity might be produced. Although it was commonly limited to the nose, it might extend to the cheeks, and possibly all over the face, and might even assume a butterfly shape. The warty excrescences were rather unusual, but they were simple expressions of the underlying process. The lodgment of micrococci in these sebaceous follicles might have something to do with the development of these new growths. In the majority of cases, rosacea had its origin in an excessive use of beer or ales, although in some instances, it was the result of simple gastro-intestinal disorder, and in exceptional cases, occurred in those who were entirely free from alcoholic indulgence.

The treatment consisted in touching each of these patches with tincture of iodine, and then painting the surface with collodion. When the excrescences had been reduced in this manner, hot water should be applied freely, and then equal parts of blue ointment and zinc ointment. A little later on, the following pigment should be applied:

Chrysarobin.
Salicylic acid . . . each one-half a drachm
Flexible collodion . . . . . one ounce

Pustular Syphiloderm.

Dr. Taylor then showed to the class a man, who exhibited erythema of the fauces, general adenopathy and a general syphilitic eruption

of the type known as the smaller pustular syphilide. It began as a papule and it was rare to find it not interspersed with pustules. Where there was the greatest pressure, as on the back and buttocks, it had caused some inflammation around the patches which were distributed over the body in groups.

PERISCOPE.

Hypnotism Before the British Medical Association.

The *New York Medical Journal*, August 30, 1890, says, editorially:

The obscure phenomena of hypnotism were made the subject of serious attention at the recent meeting of the British Medical Association at Birmingham, when a paper on the subject was read by Dr. Norman Kerr, which was followed by a discussion that occupied the time of the Psychological Section for two days. The reader of the paper accepted practically all the alleged hypnotic phenomena as facts, but in hypnosis, after close watching, he saw only a distorted cerebral state, a condition with exaltation of receptivity and energy which was abnormal. Several questions had to be answered when we came to consider the applicability of hypnosis to therapeutics. Only a limited number of persons were susceptible, and even in these the after-effect was a disturbed mental balance and nerve exhaustion. Deterioration of brain and nerve function, with intellectual decadence and moral perversion, was apt to follow frequent repetition. Dr. Kerr, moreover, maintained that hypnosis itself was a departure from health, a diseased state, a true neurosis, embracing the lethargic, cataleptic and somnambulistic states, and that, if a disease was cured by hypnotism, it would merely be by the substitution of another disease. Hypnotic suggestion might sometimes temporarily assuage suffering, but the underlying disease was not necessarily cured, though evanescent oblivion might be secured, and the lethal power of the morbid disorder was in most cases increased. The few patients he had seen apparently benefited had in no way been beyond the reach of ordinary treatment, but they resisted or were passive to that, while they gave themselves up to the mesmerizer, and became the subjects of what he called a jelly-fish slavery, which was worse than days and nights of pain and rendered their lives total wrecks. In the somnambulistic state subjects had been compelled by the operator's behest to commit crime. So serious were the evils that French surgeons had been prohibited from practicing hypnotism in the army and navy.

The gauntlet was taken up by Dr. Kingsbury, of Blackpool, who has adopted hypnotism in his practice and professes to have effected many cures by its agency. After describing the peculiarities of the two schools of Paris and Nancy, he entered into a discussion of the dangers of hypnotism and the range of its applicability, and detailed the clinical histories of cases treated by him by hypnotic suggestion. In one instance a patient suffered from sleeplessness, the result of a neuralgia. He hypnotized the subject and left a paper with him on which was written: "Go to sleep at once and wake up to-morrow morning at 7.30. You will have no pain when you awake." And the experiment answered admirably. Seven out of ten persons were susceptible to the influence. He maintained that hypnotism was a useful adjunct to regular treatment, and said that it behooved medical men to become familiar with it, so as to be able to use it in special cases. Demonstrations were then given by Dr. Kingsbury and Dr. Tuckey on two subjects brought for the purpose from Manchester. The usual performances were gone through with, in no way differing from those commonly seen on the public platform.

A general discussion of the subject then took place, in the course of which Dr. Gairdner, of Glasgow, said he should leave the meeting in a somewhat different state of mind from that in which he entered it, and had not the smallest doubt that many other persons present would be in a similar state to his own. A great many years ago he had been disgusted by an exhibition of hypnotism in the drawing-room. While he did not doubt that there was a great psychic force involved in it, still, he had the strongest feeling that there was something, to use a Scotch expression, "no canny" about it, and that it was not for physicians to tamper with. Dr. Clifford Allbutt sided with the hypnotizers in the discussion, and referred to Dr. Norman Kerr's brilliant rhetoric, but failed to find in his discourse mention of any facts. If the profession did not take up the subject, it was sure to fall into the hands of quacks. He did not think that medical men were justified in

throwing the whole thing overboard. Dr. Hack Tuke had been much interested in the phenomena, and thought the subject had a direct medico-legal bearing. He gave instances of patients who had been directly benefited by it. Another speaker, alluding to the moral aspect of the question, asked very pertinently whether any of those present would allow their wives or their daughters to be hypnotized except on the strongest possible grounds. If not, they had no right to hypnotize others. The opinion was very generally expressed that it was time for the government to put a stop to the disgusting public exhibitions of hypnotism which were becoming very prevalent, and that it would be well for the British Medical Association to appoint a committee to investigate the whole question of hypnotism and to give facilities for experiments upon lower animals as well as upon human beings.

On the whole, this discussion, which is the first occasion on which the subject has of late years gained the serious attention of the profession, will yield good results. The matter has been carefully considered. Evidence *pro* and *con* has been weighed, and both sides have had a fair hearing. To whatever length the friends of hypnotism may go in France, it is certain that in England its title to be considered a therapeutic agent of utility must be fully proved before it is accepted.

Absence of Both Hands.

Dr. James Finlayson, Physician to the Glasgow Western Infirmary, describes in the *Archives of Pediatrics*, September, 1890, a case of congenital deformity, which is of much interest. The bones of the forearm were shorter than normal, and she had absolutely no trace of hands. There were, indeed, little wart-like projections on both stumps. On the left, this projection was seen to consist of two portions, the smaller one being on the radial side, while that on the ulna was divided into four by minute grooves. On the right stump, the wart-like projection was smaller and simpler. The photograph shows both. Professor Cleland, who examined the limbs, found no trace of carpal bones. In the right arm the ulna was shorter than the radius, the end of which was somewhat curved. The radius and ulna were not united in either of the stumps.

The child could sup with a spoon. She could do this by inserting the end of the handle of a teaspoon under her sleeve, balancing the lower part of the handle on the stump, and guiding the contents to her mouth. If a tablespoon of the ordinary size were given to her while her arms were bare, one could see that she held it in the flexure of her right elbow, the end of the handle going behind the humerus, and the stem of the spoon being supported by the stump; if any difficulty occurred in lifting or filling the spoon, she steadied the tip of the spoon with her other stump. Her left stump guided the inclination of the basin as required. In this way she could sup milk with considerable rapidity and precision. She could also write with a pencil on paper. She held the pencil between the two stumps. She had, apparently, only learned at school to write down figures. She could lift toys with ease, and she could take sweetmeats out of a wide-mouthed bottle by balancing them, one by one, on the stump, using the right one by preference. She could even lift ordinary pins off the floor. She was tried with scissors, but she had not practiced cutting paper before. She put the tapering corner of the right stump through the upper ring, and, after adjusting the paper, she put the angular part of the left stump into the lower ring, and then began to clip. This was done somewhat unevenly, but it had not been practiced. She could turn over the pages of a book with great precision, and was very particular not to take two leaves at a time.

The girl was admitted to the Royal Hospital for Sick Children, Glasgow, on April 20, 1889, for some digestive disorder. She was detained for a little time, after recovering, in order that her deformity might be studied further. She was six years old. No malformations were known in the families of the parents. The first child of the marriage is living and healthy. The second was still-born. The third and fourth pregnancies resulted in miscarriage at the third month. Fifth pregnancy: the child was born alive, but only survived twenty hours. Sixth pregnancy: the child is still living and well. The seventh pregnancy resulted in the birth of the girl here described; she was born at the seventh month. The only incident the mother could mention as notable was the occurrence of a bleeding, similar to the menstrual discharge, about the middle of this pregnancy.

The girl seemed remarkably bright and

clever. She had no other defect or malformation. The town authorities had tried to help her by supplying artificial hands furnished with hooks, etc. But the child's power of using her own stumps rendered these artifices worse than useless.

Cause of Cholera.

The *Abstract of Sanitary Reports*, August 19, 1890, quotes from the *Journal d' Hygiene*, July 24, 1890, that the French Society of Hygiene has received from Dr. Tholozan, honorary member of the Society, some precise information with regard to the outbreak of cholera in Mesopotamia. He asserts that cholera lingered in this region during the winter in a light, sporadic form, to break out with violence with the first heat of summer, and that in view of this fact the theory that choleraic epidemics can be controlled and subdued by restrictive measures must be abandoned.

The unexpected appearance of cholera in certain small localities in the province of Valencia, Spain, is also fatal to the tradition which makes all cholera epidemics originate on the banks of the Ganges. The partisans of a theory which reigned supreme from 1867 to 1887, and which was affirmed by every international congress of hygiene and by the academies of sciences and of medicine, will find it difficult to deny that the cholera which appeared in the village of Puebla de Rugat was an epidemic of local origin, a revival of the great choleraic epidemic which in 1884 and 1885 prevailed in Spain and especially in the province of Valencia.

In 1875 Dr. Tholozan showed by authentic reports that many epidemics of cholera and plague originate on the spot from germs previously deposited in the soil. At the conference of Rome and at the Congress of Hygiene of Vienna, the French delegates urged the establishment between the several States of the two hemispheres of an international treaty, directed against pestilential diseases (cholera, yellow fever and plague). Among the fundamental terms of this treaty an international sanitary inspection of vessels entering the Suez Canal was proposed.

In his last study of cholera, Pettenkofer demonstrates from the history of choleraic epidemics that general prophylactic measures, based on the theory of contagion, are costly and impossible of application, have proved their complete inutility in the past, and that they will be equally inefficacious in the future.

On the other hand, Dr. Mahé, sanitary physician of France at Constantinople, in a paper on the progress of Asiatic cholera from the East Indies westward during the past decade, asserts that all choleraic epidemics which have descended upon Europe have come, some by direct irradition of the epidemic from Hindoostan, some by importation into the Hedjaz and Egypt.

Sir Joseph Fayre, in an article presented to the Medical Society of London, on the natural and epidemiological history of cholera, arrives at the following conclusions:

"The theories of contagion and propagation by human means do not explain the spread of choleraic epidemics, since their frequency and direction and the rapidity of their propagation bear no relation to the development of the means of communication.

"Epidemics, although a constant condition of the life of man, are not unavoidable and are subject to common sense and the laws of hygiene."

Dr. Kelsch, of the *Val du Grace*, after an impartial review of the rival theories which have disputed the ground during the past half century, the theory of importation, supported by Fauvel, Rochard and Proust, and the theory of evolution, supported by Jules Guérin, Tholozan and Didiot, sums up the discussion with the practical conclusion that the prophylaxis of cholera belongs primarily to local and individual hygiene.

In 1884 Dr. Jules Rochard, in a report on cholera in Toulon, read before the Academy of Medicine, asserted that "cholera can reach us only by way of the Red Sea. The Suez Canal is the only dyke which protects Europe against this scourge. Whenever it shall be broken a destructive flood will sweep over Europe."

Case of Gastrostomy.

Dr. George W. Gay, Visiting Surgeon to the Boston City Hospital, reports the following instructive case in the *Boston Medical and Surgical Journal*, Sept. 4, 1890.

Early in the summer of 1889 a large-framed, powerfully built man, about fifty years of age, came to his office, complaining of inability to swallow anything but liquids. This difficulty had been gradually

increasing for about a year. He had lost much flesh and strength, and was slowly starving to death. Hungry all the time; felt that he could eat anything, and in large quantities, if he dared to do so. He was obliged to confine himself to liquids, and could take those only in small sips, otherwise they were immediately regurgitated. The first mouthful, as he said, was all right, but after that "everything comes up." There was no sharp pain, merely a sense of pressure. He had lost thirty pounds in weight during his illness, and was in a pitiable condition. On exploration with the œsophageal bougie, only the next to the smallest size could be passed through the stricture, which was located behind the sternal notch. The glands in the neck were somewhat enlarged. Nutritive enemata of milk and beef juice were ordered every six hours. These afforded only partial relief, and the man begged to have something radical done. He was anxious to take any risk for relief, and under the circumstances Dr. Gay finally consented to accede to his urgent solicitations to open the stomach, in other words, to do gastrostomy.

The operation was done at the City Hospital, under ether, July 21, 1889. An incision four inches long was made, an inch and a half below the border of the ribs on the left side, commencing about two inches to the left of the ensiform cartilage. On dividing the peritoneum to the extent of an inch and a half, the stomach was found collapsed about five inches from the anterior abdominal parietes. It was drawn into the wound, and placed under easy control by means of two wire loops about three-fourths of an inch apart, passing through the outer coats of the stomach. The organ was then secured to the edges of the wound by means of silk sutures, the peritoneal surfaces being carefully apposed all around the abdominal incision. Finally, with a tenotomy knife an incision, or rather a puncture, not over a quarter of an inch in size, was made into the stomach. It was just large enough, in fact, to admit the point of a small glass tube, which served as the nozzle to the syringe or feeding apparatus. Eight ounces of warm peptonized milk were slowly injected into the stomach, and the small opening securely closed by simply twisting the wire loops very loosely. The dressing consisted of iodoform gauze and swathes.

The patient rallied well from the anæsthetic. He was fed every five hours in the following manner: Half a pint of warm peptonized milk, with or without bovinine, was slowly poured into a small glass funnel, to which was attached a rubber tube about two feet in length, this being about the fall required for the liquid to flow easily into the stomach. The patient declared positively and repeatedly that he felt much less hungry, and less prostration and restlessness after the artificial feeding was commenced. He even felt so well that he got out of bed, although warned against doing so. He lay in bed, received his food regularly, and was comparatively comfortable, requiring no morphia till eight days after the operation, when he was seized with severe pain in the epigastrium, due probably to separation of adhesions about the wound. The distress was readily controlled with morphia, given under the skin. Two days later he had a sudden and severe attack of dyspnœa, amounting, in fact, to orthopnœa. It did not persist, and gave little trouble afterwards.

Fifteen days after the operation some difficulty was met with in trying to introduce the tube into the fistula, and the liquid caused pain, indicating that, in all probability, it did not enter the stomach directly, if at all, but rather some adventitious cavity outside that viscus, a fact proved by the autopsy. Rectal feeding was substituted for three days, when the method by the artificial operating was again resumed. At this time the stomach began to get irritable, and the food was rejected soon after being introduced. The strength began to give way; a moderate febrile condition developed; consciousness was retained to the last; food was rejected both from the stomach and from the rectum. The man died from exhaustion twenty-six days after the operation.

The *post-mortem* disclosed chronic pulmonary tuberculosis, cancer of the œsophagus, acute diffuse peritonitis, senile atrophy of the kidneys, chronic pleurisy and cloudy swelling of the kidneys and liver. Three small, ragged tuberculous cavities were found at the apex of the right lung. It should have been stated above that a troublesome cough developed during the last few weeks of the patient's life. It was never severe enough to call for special treatment. At the autopsy it was found that the external wound communicated with the stomach, and also that a cavity had formed between the stomach and spleen and surrounding tissues. A certain amount of the food had evidently

entered this cavity, thereby causing the pain. About half a pint of whitish opaque fluid was found in the peritoneal cavity. The peritoneum in the region of the liver was lined with an opaque white membrane. The surface of the stomach was of a diffuse red color, on the posterior and lower portion, the rest of the walls being dark green from *post-mortem* changes. The glands were somewhat enlarged.

The whole circumference of the œsophagus for two inches above the sternal notch was the seat of a rough, elevated, nodulated growth, having an irregular outline, and being fully an inch thick in one place. It was more especially developed on the posterior surface of the canal. The microscope showed the growth to be composed of reticulated connective tissue, with epithelial cells in spaces.

Dr. Gay asks: "Did this man get sufficient relief to encourage us in repeating the operation under similar circumstances?" He says he has no hesitation in saying that he did. It is fair to conclude that he lived as long and had less suffering by reason of the operation. The only alternative was hypodermic morphia, a rather poor substitute for food. The breaking down of adhesions between the stomach and parietes was probably unavoidable, on account of the great antero-posterior diameter of the abdominal cavity. If a patient with nearly complete occlusion of the œsophagus is so weak that he evidently has but a short time to live, it is doubtful if much benefit is to be derived from this operation. But, under opposite circumstances, if the person is able to be up and about, and has a prospect of some weeks or months of life, a very considerable relief to the gnawings of hunger, and its attendant restlessness, may be confidently expected from the procedure. Under these circumstances the operation is to be recommended, provided rectal feeding fails to accomplish the object.

Spontaneous Ecchymoses in Hysterical Patients.

Spontaneous ecchymoses of hysterical origin are not very rare, but the cases have not been collected. They are usually noted in observations which treat of bloody sweats, of cutaneous hemorrhages and of the bloody stigmata well known in hysterical patients, in which they constitute, so to speak, the premonitory period. They have been studied especially by Magnus Huss, in 1857, in a remarkable paper which contains numerous medico-legal considerations. For example, he speaks of a servant-girl, twenty-three years old, who began to complain of having been badly beaten by her employers. As proof of her assertions, she showed at the top of her head an effusion of blood, which persisted several days, but without apparent lesion of the skin and which was subsequently accompanied by spontaneous ecchymoses and other cutaneous hemorrhages associated with characteristic hysterical attacks.

Gilles de la Tourette, in the *Gazette Medicale de Paris*, August 2, 1890, describes a new instance of hysterical ecchymosis in a young girl. He has been able to demonstrate the spontaneous appearance of an ecchymosis on the internal surface of the right thigh. He holds that hysteria is only a sign, one of the symptoms of a degeneration of the mind. Hence the crimes committed by an hysterical patient are to be referred to the degeneration, not to the hysteria which marks the degeneration.

Preventing Hemorrhage During Amputations at the Hip-Joint.

Dr. J. A. Wyeth, of New York, has recently designed the following method of preventing hemorrhage in amputation at the hip-joint. The limb having been elevated and an Esmarch bandage having been applied, two steel mattress needles, three sixteenths of an inch in diameter and a foot long, are used. The point of one is inserted an inch and a half below the anterior-superior spine of the ilium and slightly to the inner side of this prominence, and is made to traverse the muscles and deep fascia, passing about half way between the great trochanter and the iliac spine, external to the neck of the femur and through the substance of the tensor vaginæ femoris, coming out just back of the trochanter. About four inches of the needle should be concealed by the tissues. The point of the second needle is entered an inch below the level of the crotch internally to the saphenous opening, and, passing through the abductors, comes out about an inch and a half in front of the *tuber ischii*. No vessels are endangered by these needles. The points are protected by corks to prevent injury to the operator's hands.

A piece of strong white rubber tube half an inch in diameter, and long enough when tightened in position to go five or six times around the thigh, is now wound very tight around and above the fixation needles and tied. The Esmarch bandage is removed and five inches below the tourniquet a circular incision is made, and a cuff which includes the subcutaneous tissues down to the deep fascia is dissected off to the level of the lesser trochanter, at which level the muscles and vessels are divided squarely and the bone sawed through. All vessels (including the veins) which can be seen are tied with catgut and the smaller bleeding points can be discovered by slightly loosening the tourniquet. The remaining portion of the femur is now easily removed by dividing the attached muscles close to the bone and opening the capsule as soon as it is reached. On lifting the end of the bone in the direction of the patient's navel and dividing the cotyloid ligament posteriorly, the air enters the cavity of the acetabulum and greatly facilitates the division of the ligamentum teres. —*Annals of Surgery*, August, 1890.

Experiments with Brown-Sequard's Elixir.

A case was recently tried in a Cincinnati court in which the conditions were rather peculiar, and in which the finding of the judge was of interest to others than the one directly concerned in the matter. It seems that a physician of that city was sued by a man who claimed to have been injured by experiments with the elixir of youth. The man had been paralyzed for some time, and could get about only with much difficulty. The physician called him in as he was hobbling past his office, and proposed to try the effect of the "elixir" on his paralysis. The old man consented, and a charge of the stuff was injected into each leg. The result was that an abscess formed on his paralyzed leg, from which he suffered greatly.

The patient did not apply to the doctor for treatment, and the doctor made no charge for what he did. It was an experiment, attended with danger, which the doctor was eager to make, and the patient, with perhaps a limited understanding of the matter, seemed willing should be tried.

It was contended by the defence that the case was not one of malpractice, nor could it quite be called an assault, and it fell short of the definition of a tort. Although the sufferings of the patient might be directly traceable to the doctor's act, yet it was a question whether the doctor did anything of which the law could take cognizance.

The jury, however, brought in a verdict against the defendant, assessing the damages at seventy-five dollars. The judge charged the jury that it is not malpractice where a physician treats a patient upon his own motion and without pay, but the physician is bound to use ordinary skill even under such circumstances, and if he does not use such skill, or is guilty of carelessness, he is guilty of a tort for which he is liable in damages. —*Medical Record*, August 30, 1890.

A Mistake about Clean Surgery.

The correspondent of a Paris newspaper, *Le Rappel*, writing from Berlin in regard to the statement of Sir Joseph Lister that he had abandoned certain details of his aseptic method, and his acknowledgment of the value of the procedures of Bantock and Tait who had so often attacked his method, complained that Lister might as well have mentioned the Frenchmen, Jules Lefort and Armand Déspres, who had taken the same position as the Englishmen mentioned, and by the use of scrupulous cleanliness had secured the best results in surgery. The *Mercredi Médical*, August 20, 1890, referring to this, points out the error of *Le Rappel*, which confuses Jules Lefort, who is a pharmacist, with Léon Le Fort, who is a distinguished surgeon: and says that it is rather amusing to have Déspres credited with scrupulous cleanliness in surgery, in view of the fact that he makes it his boast that he never brushes his finger-nails, and that he has perpetuated the traditions of "dirty dressing."

Damascenine.

Dr. Alfred Schnider, of Dresden, has isolated from the seeds of Nigella damascena, L., an alkaloid which he names damascenine. The solutions of the alkaloid in water, alcohol, ether and fixed oils, exhibit a beautiful blue fluorescence, which can be observed in dilutions as high as 1 to 200,000. The formula of the body is $C_{19}H_{21}NO_5$. It is crystalline and forms crystalline salts.—*Druggists' Circular*, September, 1890.

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CHARLES W. DULLES, M.D.,
EDITOR AND PUBLISHER.

N. E. Cor. 13th and Walnut Streets,
P. O. Box 843. Philadelphia, Pa.

INTERMARRIAGE AND THE PROPAGATION OF DEAFNESS.

In a paper published in the *American Annals for the Deaf*, July, 1890, Mr. W. G. Jenkins discusses a charge made by Professor A. Graham Bell, we believe, in the *British Medical Journal* of May 11, 1889, that philanthropy in the United States is doing every thing possible to encourage marriage among deaf-mutes, and that we educate them together, teach them a language of their own, so that they know nothing of English, with a broad intimation that the methods of educating the deaf approved and practiced in America tend to confirm their condition and to multiply the number of persons so afflicted. Mr. Jenkins, in a thoroughly courteous manner subjects the evidence given by Professor Bell to what he calls "that sifting process which honors no name, respects no authority, which strips itself of all preconceived notions, and chronicles only what investigation proves to be the clean, filtered truth."

In doing this he points out a very common source of error in scientific discussions, namely, the undue weight attached to the opinion of men, learned in other subjects, who have no exceptional share of knowledge in regard to a particular one under consideration. "Such," he says, "is the vicarious character of a national reputation, that a man carries with him all the weight of his special equipment, even when passing beyond the limits of his particular field. So distinguished an authority as Max Müller recently gave expression to the opinion that deaf-mutes, left to themselves, would rise no higher than orang-outangs, although he immediately qualified this by declaring himself an agnostic as to the inner life of deaf-mutes. The statement is an illustration of how far a man confessedly great in one branch of study may go wrong when treating of questions outside of his specialty." Mr. Jenkins comments especially upon the charge that the intermarriage of the deaf is calculated to multiply the relative frequency of deaf-mutism. If this were a source of real danger, he says, the American Asylum at Hartford, after a history of more than two generations, ought to show some signs of it; but of the first hundred pupils admitted, beginning in the year 1817, forty-five were born deaf, while of the last one hundred, ending in 1889, forty-one were born deaf; so that after seventy years of deaf-mute education, with its enormous proportion of deaf-mute marriages and the asserted increasing percentage of deaf-born children, the proportion born deaf remains practically unchanged, the slight change which has occurred being a decrease.

As to the principles which are involved in intermarriage of the deaf, he cites Professor W. K. Brooks, of Johns Hopkins University, that the conditions for the evolution of a deaf-mute race are that those among

the deaf who marry must have the same inherited peculiarity. From this statement of the case, Mr. Jenkins doubts whether any of those most familiar with the deaf would dissent. The only comment they would be likely to make would be that marriage among the deaf of those having the same inherited peculiarity is as rare as marriage between people with red hair. Furthermore, the law of regression, as announced by Professor Galton, will assert itself; and there will be a constant tendency, even among the children of parents having the same peculiarity, to revert to the normal type. The evolutionary process which produced hearing ought in time to repeat itself, and individuals in the variety would soon multiply, and the defect in time be eliminated. The reference of writers to the experience of breeders is not quite pertinent, for in none of their cases was the point to be transmitted a defect. Success in the progressive development of new species, Mr. Jenkins thinks, ought not to be cited to prove that the attempt would be equally successful in a process of deterioration. This much is evident, that, if a deaf-mute variety could ever be formed, it would only be after rigorous selection among those whose heredity had already become a fixed quantity, under the controlling purpose of making the experiment a success. That this will ever take place, the wildest pessimist of the future of the deaf will hardly venture to claim.

This is a subject of great interest and of equal practical importance, and it deserves the careful attention of medical men. So much is gained by bringing together persons afflicted with deafness, by way of mitigating the severity of their hard lot, that philanthropists naturally cling to the hope that it is not a practice dangerous to posterity; and it is comforting to find that one so experienced as Mr. Jenkins should take the view of the matter cited above. We trust he is right, and that the deaf need not be debarred from marriage among themselves.

CONSUMPTION AMONG FIREMEN.

The attention of the readers of the REPORTER is especially called to the article in this number by Dr. Mays which contains facts of great importance in connection with the ætiology of consumption. There are many who, in this age, regard it as a sign of defective intelligence to question the importance of the rôle attributed to bacteria in the production of a number of diseases, and in none more notably than in consumption. And yet, in this as in other diseases, from time to time facts are reported by competent and discreet observers which very much weaken the force of the arguments, accepted by many as incontrovertible, on which the germ theory of the disease rests.

It is interesting to observe the result of such investigations as Dr. Mays has recently conducted and now reports in this journal. Firemen are, as he says, of all men those who seem least liable to contract consumption by contagion, and yet his figures indicate that they are far more liable than the average individual to contract it in some way, and very nearly as liable as those persons especially exposed to this danger, upon whose history men like Cornet rely, to prove the contagious nature of this disease. The study which Dr. Mays has undertaken is useful in itself and may be useful as suggesting lines of inquiry which will furnish material fitted to be the basis of sound and wise conclusions in regard to the so-called contagiousness of phthisis.

PYOKTANIN FOR TUBERCULOUS LARYNGITIS.

The result of continued investigations in regard to the virtue of pyoktanin have brought about somewhat contradictory announcements. These seem to show that it is not of much service in the treatment of diseases of the eye for which it was at first so highly recommended; but it appears as though there were conditions for which it has de-

cided usefulness. Dr. J. Scheinmann, assistant in the University Polyclinic for Throat and Nose Diseases in Berlin, reports in the *Berliner Klinische Wochenschrift*, August 1, 1890, some very remarkable results of the use of pyoktanin in the treatment of tuberculous ulcerations of the larynx and the nose. The method of treatment recommended by Scheinmann for tuberculosis of the larynx consists in the administration of creasote in increasing doses, inhalations of menthol or cresol continued for months, together with massage to combat paresis of the adductors and the subacute catarrh. As a basis of treatment in every case he attaches great importance to antiseptic inhalations, among the most efficient of which were menthol or cresol. In many cases it is necessary to make local applications to the ulcers in the larynx and pharynx; and for this he recommends lactic acid, but he prefers, as more mild and more prompt in its action, pyoktanin which, in his hands, has given admirable results. It has proved absolutely unirritating and its use has been followed by rapid cicatrization. Electrolysis has proved of use in his hands as a mild and efficient remedy. Scarification, curetting and excision are occasionally called for. With the co-operation of Prof. Fränkel, Scheinmann undertook to test the value of pyoktanin in these conditions. The way he used it was this: the knob of a flexible copper probe was heated and dipped in a pure powder of blue pyoktanin. This caused the adherence of a firm half-burnt layer, to which pure pyoktanin adhered in fine granules. This probe was passed into the nose and larynx and the pyoktanin was energetically rubbed on the surface of the ulcers, the parts having previously been anæsthetized with cocaine. After using, the probe was put in the flame, by which the pyoktanin was ignited and lost its coloring property. The action of pyoktanin is easy to follow and to limit because it has such powerful staining property. Usually the ulcers, after two or three days, show lighter coloration and a decided improvement. The secretion disappears, and it is hard to tell whether the ulcers are still there or cicatrization has already begun. The action of pyoktanin itself seems to be painless. Scheinmann speaks of two cases, out of a number, in which he used this method with very good results.

This very interesting communication deserves especial attention, because there are few disorders more troublesome than tuberculosis of the larynx. There is strong theoretical reason to expect that pyoktanin would act favorably upon such conditions, and it would be a great boon if further experience shows that it really has a favorable action upon local tuberculous manifestations.

NOT A FAST, BUT A FRAUD.

For several months past the newspapers have been publishing sensational descriptions of the condition of a woman in Allentown, Pa., whose case is said to have "puzzled the doctors." It is asserted that she has not tasted food for nearly six months, and some accounts say that she did not drink any water. Of course, such a case is regarded as marvelous by the general public. But the like is not unknown in medical history. Physicians know that it is absolutely impossible for life to be maintained for such long periods, especially in connection with violent muscular exertion such as accompany convulsive action, and this has been a prominent feature of the case of the woman referred to.

The REPORTER has taken the trouble to investigate this matter in the interest of science, and can assure its readers that this is not a case of fasting. We have no hesitation in asserting that this woman receives both food and drink every day. At present she is not emaciated, or but slightly so. She perspires, her muscles are firm, and she has considerable deposit of subcutaneous fat. She has regular, though not frequent, motions of the bowels. Her attending physi-

cian is quoted by the newspapers as believing the case to be one of genuine inability to partake of nourishment by the mouth; but the readers of the REPORTER will understand that the facts stated above are absolute and convincing proof that she does get food and assimilate it regularly, notwithstanding the belief of her physician.

This is not a case in which there can be any doubt at all. In due time, we shall probably learn just how her feeding is managed; but this information is not at all important to a just opinion in regard to the case. Quite a number of similar impositions have been practiced in the past, but all have been finally detected. The present case is not at all wonderful from a physiological standpoint, but interesting as a so far successful imposition on the public.

PECULIAR ADVERTISEMENT.

The *Allgemeine Medicinische Central-Zeitung*, which is one of the most interesting and instructive of our German exchanges, contains, in its issue of July 26, an advertisement of a "Damenseife matrimon. secreto," or a soap especially prepared for married women, which is recommended as a deodorant and antiseptic, and is said to deserve the most careful notice because of its peculiar power in preventing "development" (entwickelungshemmende Eigenschaften). Entwickelung means development; but it is the word technically applied to embryological development. To the pure all things are pure; but in this advertisement there seems to be somewhat more than appears on the surface.

CORRECTION.

The address of Dr. T. J. Happel, author of the paper on Medical Treatment of Typhoid Fever, in the REPORTER, September 13, is Trenton, Tenn., instead of Nashville, where it was read.

BOOK REVIEWS.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the REPORTER.]

THIRTEENTH ANNUAL REPORT OF THE BOARD OF HEALTH OF THE STATE OF NEW JERSEY, AND REPORT OF THE BUREAU OF VITAL STATISTICS FOR 1889. 8vo, pp. 486. Camden: F. F. Patterson, 1890.

The present volume includes the Report of the Secretary of the Board, Dr. Ezra M. Hunt, of Trenton, which is a good review of the sanitary requirements of the State. The following articles also find an appropriate place: The Thermometry of Hygiene, by Dr. D. Benjamin, of Camden; The East Orange Sewage Disposal Works, by C. P. Bassett, M. E., of Newark; Sewer Systems of the State, by Dr. A. Clark Hunt; Tuberculosis, by Dr. S. G. Dixon, Philadelphia; Disposal of Town Refuse and Garbage Destructors, by Dr. Ezra M. Hunt; Physical Culture, by Principal Green, of the State Normal School, Trenton; The Need of Medical Officers for School Districts, by Dr. B. F. Wilbur, of Asbury Park; The Improvement of the Sanitary Conditions of the Health and Pleasure Resorts of New Jersey, by Dr. Henry Mitchell, of Asbury Park; and Abstracts from Papers and Discussions of the New Jersey Sanitary Association, 1889, by Dr. D. C. English, of New Brunswick.

The volume concludes with a summary of the reports of local boards of health, the health laws and circulars, and the medical registry for the year. It reflects credit upon the medical profession of New Jersey, and especially upon the able Secretary of the Board, Dr. Ezra M. Hunt.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF WEST VIRGINIA. Twenty-second Annual Session, at White Sulphur Springs, July 17 to 19, 1889. 8vo, pp. 84. Wheeling: 1890.

The address of the President of the Society, Dr. L. D. Wilson, of Wheeling, reminds one of the formal addresses which formerly it was the rule for presidents of societies to give. At the present day, however, the members are too anxious to get to work to listen to a long address. Dr. Wilson gave his hearers a great deal to think about, and we hope that the bare mention of the fact that twenty of the counties are without representation in the State Society will in itself be sufficient to rectify this most unfortunate neglect. The subject of medical examining boards was discussed. Dr. Wilson is in favor of boards chosen by the State Societies. In this he differs from those who have given the matter most careful study.

Dr. J. N. Upshur, of Charleston, has a paper on Reflex Bladder Troubles, in which he reports an aggravated case for which a great deal—perhaps too much—was done locally without benefit. The case seems to have been one of hysteria, with heightened sexual excitability. Dr. W. W. Tompkins, of Charleston, reported some cases of hemiplegia. Dr. J. D. Myers, of Huntington, read a paper with the rather striking title, "Care of Our Females." He urged the importance of hygienic care of the female sex from earliest infancy. Dr. William C. Dabney, of the University of Virginia, read an interesting paper on the Significance and Treatment of Cardiac Pain. Dr. Joseph A. White's paper, on Nasal Obstruction, deal with this condition and its relation to "catarrh" of th

throat and respiratory passages, and also to headache, cough, etc. Dr. E. H. Fravel, of Poca, reported an interesting series of one hundred cases of ulceration of the cornea. Drs. Thomas R. Evans and D. Mayer, of Charleston, read short papers on a case of Cancer of the Stomach without Pain, and The Mineral Waters of Crockett Warm Springs, which contain arsenic, bromine and lithium.

The volume scarcely does the profession of West Virginia justice. We hope more of them will attend the meetings of the State Society, and make the next volume of Transactions considerably richer in clinical material.

LITERARY NOTES.

—The seventh edition of "Da Costa's Medical Diagnosis" is now announced by J. B. Lippincott Company as ready. The work has undergone a thorough revision at the hands of its eminent author, and many chapters have been entirely re-written, so as to inculcate all that has been added to our knowledge of disease up to the present time. A number of wood-cuts are included, especially of such micro-organisms as have proved to be of practical significance in diagnosis. All the illustrations are original, and many are from sketches, or based on sketches, taken directly from cases of interest. There is no work more helpful to a young practitioner than this one, which has already been pronounced by eminent critics the best book on diagnosis extant.

—A valuable book just issued by J. B. Lippincott Company, is Professor Garretson's Treatise on the Diseases and Surgery of the Mouth, Jaws, Face, Teeth, and associate parts. Upon the appearance of the first edition many years ago, it assumed the leading place as a text-book, to which its merit and the distinguished position of its author entitled it. Much important matter has been added to the new edition, together with numerous illustrations, which greatly increase its value to dentists, surgeons and physicians.

CORRESPONDENCE.

Traumatic Tetanus.

To the Editor.

Sir: The following two cases of traumatic tetanus occurring in my practice may interest some of the readers of the Reporter, and so I send their histories to you for publication.

The first case was that of a young farmer, living near Marshall, Va., who was cutting corn. By a slip of his knife he nearly severed the first and second phalanges of his left hand. Though a sufferer from acute pain and the crude dressing of the wound, he continued work until the third day after the accident. When I visited him his jaws were so tightly locked that the blade of a pocket-knife could not be inserted between the incisors, and deglutition was impossible. The patient was pale and in a state of health far below par, perhaps due to his late labors in a lead factory. His sufferings were intense from muscular spasms, dyspnœa and precordial distress. Notwithstanding the prompt use of anæsthetics, hypodermic remedies, enemeta and hot water appliances to the surface, he succumbed to death on the night of the fourth day after his injury. A fatal result in this case might have been averted had a physician been called promptly.

The second patient was a boy, eight years old, who was nearly recovered from traumatic tetanus, induced by a severe self-inflicted wound of the thumb. Under proper treatment and hygiene, he was making a good recovery, when unluckily an indulgent mother, contrary to directions of her physician, allowed the lad to be exposed out-doors to wet, cool weather, in the midst of which he received a blow on the wounded finger. After his relapse and within twelve hours after the second injury, all the symptoms of tetanus returned with a fatal result shortly following.

Professor S. D. Gross, in his *System of Surgery*, urges in the treatment of tetanus the importance of the removal of any foreign substance from the wounded part, and, where any fibro-cartilaginous hardness exists, to dissect out this tissue and to poultice, confining the patient to his bed, feeding well and avoiding all excitement of mind or body, adding that "one of the most valuable diagnostic symptoms of tetanus is the terrible distress in the precordium."

Yours truly,

Frederick Horner, M. D.

Marshall, Farquier Co., Va.,
September 10, 1890.

NOTES AND COMMENTS.

Poisoning by Mussels.

In the *Lancet*, July 26, 1890, Sir Charles A. Cameron, of Dublin, says: On June 30, Mrs. O'Connor, her five young children and her maid-servant—residing at Seapoint, County Dublin—partook of a meal of stewed mussels. In about twenty minutes after the ingestion of the mussels, some of the children stated that they felt a prickly ("pins-and-needles") pain in their hands. Graver symptoms rapidly supervened, and in less than an hour one of the children died, the

mother and three other children succumbing within two hours after eating the mussels. The chief symptoms were vomiting, dyspnœa, swelling of the face, want of co-ordination in movement and spasms, principally in the arms. The patients appeared to have died asphyxiated, their faces being intensely livid. One of the children and the maid (the latter had eaten but few of the mussels) suffered very much, but recovered. Medical assistance came rather late and was not of much use. The mussels had been procured from a small sheet of water, to which the sea had access, but which received fresh water and some sewage. Examinations of the water at low and high tides showed that its saltness was twice as great when the tide was in, a proof that land water drained into it when the tide was out. This land drainage would necessarily, from local conditions, be impure.

It was deemed necessary for judicial purposes that the cooked mussels, and the matters vomited by the patients, should be examined for ordinary poisons. This was done, with negative results. The uncooked mussels, compared with mussels of the same size from the open sea, appeared to have much larger livers and their shells were very brittle. An attempt to extract an alkaloid was made. The generic tests applied clearly proved the existence of a leucomaine, which, indeed, was obtained in crystals visible under the microscope, and corresponded to those described by Brieger as existing in the poisonous mussels which he examined. The quantity of material available did not, however, yield a sufficient quantity of the leucomaine for a thorough examination. I have procured a supply of mussels from the pond in which the poisonous mussels were found, and hope to be able to extract from them a substantial quantity of the leucomaine, which will probably be found identical with Brieger's mytilotoxine ($C_6H_{15}NO_2$). The mussels are mixed with mud having an offensive odor.

The Seapoint case is another instance of poisonous mussels being procured from foul or stagnant water. In this case the opinion of M. Dutertre, that the liver of poisonous mussels is the seat of disease and the generator of the poisonous leucomaine, seems confirmed; but I cannot agree with the French observer that the disease is never the result of the poisonous nature of the food of the mussel. I have read all, or nearly all, the cases of mussel poisoning on record, and I gather from such details as are given with respect to the places in which the mussels were found that they were in contact with sewage or stagnant water.

Splenectomy.

In the *University Medical Magazine*, September, 1890, Dr. M. Howard Fussell, Chief of Medical Dispensary in the University of Pennsylvania, gives an account of a patient of his upon whom Dr. Charles Penrose did the operation of removing the spleen which was enlarged to four times its normal size. The exact nature of the tumor for which the abdomen was opened was not known before the operation was undertaken. The patient died in about forty hours after the operation.

The history of this case is followed by a table of splenectomies, collected by Dr. Fussell up to April, 1890. In making up this table he has made use of the statistics of Otis, Foubert, Péan, Asch, McCann and Franzolini, and has, wherever possible, confirmed their statistics by reference to the original articles.

An analysis of the table gives the following results:

Cause of Operation.	Number	Deaths	Recoveries
Simple Hypertrophy,	28	19	9
Leukemia,	24	23	1
Accidents,	26	1	25
Floating Spleen,	16	1	15
Cysts of Spleen,	5	1	4
Rupture of Spleen,	2	2	0
Suppuration of Spleen,	2	0	2
Pernicious Anemia	1	0	1
Sarcoma of Spleen,	1	1	0
Totals,	105	48	57

The greatest mortality, taking into consideration the number of cases, is found where the operation was done in persons suffering from leukemia—only one patient having recovered out of twenty-four. This mortality is due not alone to the grave disease from which the patients suffered, but also to the great size of the tumor removed—by far the greatest number of deaths being due to hemorrhage after the operation. The successful case of Franzolini is of especial interest. The blood count before the operation showed undoubted grave alteration in the relation of red to white cells, and the

spleen was but moderately enlarged. One year after recovery from the operation the relation of red to white cells was normal. Taking into consideration the hopelessness of the medicinal treatment of leukemia, it is a question for grave consideration: whether, when a case is seen early, removal of the spleen will not give the best chance for ultimate recovery. When the case is allowed to run on for a great time, removal of the spleen implies almost certain death. In the case of simple hypertrophy death was frequently due to hemorrhage. Asch, in summing up his article, comes to the conclusion that leukemia *per se* is not a contra-indication to the operation of splenectomy, and Wells and others agree with him in this conclusion.

In the cases of accident all the patients recovered with one exception. In all the cases, the histories that I have been able to consult show that there was a wound over the splenic region, through which the spleen protuded, and was ligated and removed. It is seen, then, that the mere removal of the spleen is not, in itself, a highly dangerous operation.

In all the patients who recovered, and whose after-life was studied, there appeared to be no serious interference with any of the functions, and no permanent alteration in the relation of the white to the red corpuscles.

Leprosy and Consumption.

Dr. S. P. Wise, of Millersburg, Ohio, in a paper in the *Monthly Sanitary Record*, June and July, 1890, says:

It may be surprising to some to learn that there is the most striking resemblance between consumption and leprosy that there possibly could be between two diseases. In their pathology, in their course and distribution and many other features the diseases show the closest relationship. In fact, the points of similarity are so numerous that the question has been asked whether leprosy is not itself a tubercular disease. The bacillus of leprosy is so similar in appearance to that of phthisis that the most accomplished bacteriologist can find little or no difference between them. In consumption the germ is conveyed to the lungs by the atmosphere, while in leprosy the virus enters the system through abrasions of the skin on exposed portions of the body. The unshod Japanese are especially liable to the disease. After the inception of the poison leprosy is usually very slow, extending over a period of ten or twelve years, while the victims of phthisis usually last only three or four years. Both diseases tend ultimately to a fatal issue, but both are capable of becoming absolutely quiescent and inert for long periods of time. They are equally uninfluenced by climate and temperature, are distinctly endemic diseases and have both been found in almost every country where human beings are collected together in any number.

These facts are startling in the extreme when we take into consideration how loathsome a disease leprosy is, and how mankind has for ages dreaded it and has excluded the afflicted from all communication by legal enactment as well as by social ostracism. If we became aware that there was a leper in our midst everybody would flee from his presence, and we would take the promptest action possible, and would not relax in our efforts until we would have him securely quarantined. Alas, have you not constantly a disease in your midst which, although not so loathsome in its outward manifestations, is equally as contagious and even more rapidly fatal? Are you not by your kind attentions and loving care exposing yourselves to a contagion which will slowly and insiduously claim you among its victims, while your demise will be accepted as the inevitable result of heredity. It is clearly demonstrated that phthisis can be communicated by inoculation from animal to animal and from man to animal, why then may it not be communicated from man to man?

From a review of the course of the disease in the past and its affinities with other prevalent disorders; from our knowledge of its pathology and of the influences which favor its spread; from the fact of its steady diminution in the last thirty years; from all these points we are justified in regarding it as a preventable disease and may look forward to its further diminution if not its ultimate extinction as a cause of death.

Studies upon the Bacillus of Typhoid Fever.

W. Cygnæus, of Helsingfors, has reported his studies upon the typhoid bacillus, in *Beiträge zur path. Anat. und allg. Path.*, 1890, Band vii. From the *Gazette Hebdomadaire*, August 16, 1890, it appears that Cygnæus has repeated the experiments of

Frænkel and Simmonds, Chantemesse and Widal, Lepidi-Chiote, and others, upon forty-four animals of all sorts, which were inoculated by way of the duodenum, rectum, or mouth, or even through the respiratory passages. Of sixteen rabbits nine died, three following intravenous injection, one after intraperitoneal injection, and two after duodenal injection. Of eleven dogs only three died; all had received intravenous injections. The symptoms observed and the lesions were variable. The author admits, however, that very often inoculations, however performed, result in a group of symptoms characterized by fever, insomnia, loss of appetite with prostration of strength, at times diarrhœa, and that these symptoms can result fatally. At the autopsy the lesions are pretty constantly redness and swelling of the intestinal mucosa, of the patches of Peyer and the closed follicles, tumefaction of the spleen, and alterations of the liver; and it is ordinarily possible to discover the presence of typhoid bacilli in all these organs.

These lesions and bacteriological findings are especially decisive when the animal has remained a long time sick. Then the typhoid bacillus is found in heaps in a number of organs. When the animal succumbs rapidly after intravenous inoculation it may be supposed that death has been produced by the action of the products of microbe action, typhotoxine, for example. This is the view of Beumer, Baumgarten, and others. When, on the contrary, death has been slow, and the typhoid bacillus has been demonstrated during life in the excretions, and after death in certain organs, and those the most characteristically diseased, it is difficult not to admit that the micro-organism has a true pathogenic action, in the sense employed by Koch, upon certain animals. [This very moderate conclusion expresses, perhaps better than any argument could do, the uncertainty which still surrounds the pathogeny of typhoid fever.]

Treatment of Metritis.

The Paris correspondent of the *Medical Press*, August 13, 1890, says that M. Doléris has recently warmly urged the treatment of metritis of the body and neck of the uterus by the curette, of which he is an ardent partisan. He divides the operation into a lesser and a greater. The former is reserved for metritis of the body and is performed with a blunt instrument, while the latter is employed in affections of the neck of the womb, and for which M. Doléris has invented a special sharp-cutting curette. For the last ten years he has practiced 700 rugi-nations and obtained 62 per cent. of cures. He spoke very strongly against caustics which, according to him, produced sclerosis of the organ, atresia and consequently sterility. M. Polaillon in commenting on the paper said that he was successful in 82 per cent. of the cases with caustics, and always had recourse to that treatment before employing the curette. In any case where complications existed, or where the womb was displaced rugination was not as successful as chloride of zinc. M. Charpentier said that, in his hands, the treatment of metritis by rugination was attended with very satisfactory results, and he was inclined to prefer this method to the other where there was no inflammation of the appendices.

Foreign Body Two Years in the Lungs.

Dr. Ducourneau writes to the *Gazette Hebdomadaire*, August 23, 1890, an account of a case under his observation in which a woman while eating swallowed the rib of a bird. This was followed by violent coughing and an attack of suffocation, from which she recovered; but a cough and a pain in the chest continued. The usual symptoms of foreign body in the lungs were then observed: bronchitis, the expectoration of blood, and pain. Twenty-two months afterwards the foreign body was expelled during a fit of coughing, and the woman recovered.

Cooling Ointments.

Cooling ointments are defined by Unna as mixtures of fat and water which, applied to the skin, produce a sensation of cold, owing to the evaporation of the water. They are to be preferred to the usual fat ointments which prevent the normal water-evaporation and which are often of injurious action. Lanolin, owing to its ready miscibility with water and aqueous solutions, was thought to be the best base for such ointments, but experiment did not confirm this; its effect is cooling at first, but this quickly disappears and gives way to a sensation of

warmth. It was found that mixtures of lanolin and fats mix with large quantities of water and these mixtures had a permanent cooling effect. The proportions used in cooling ointments are as follows:

℞	Anhydrous lanolin	10 parts
	Fat	20 "
	Water	30 "

A "cream ointment" may be obtained by incorporating sixty parts of water instead of thirty. The *American Pharmaceutical Journal*, July, 1890, gives the following formulæ for cooling ointments.

Unguentum refrigerans:

℞	Anhydrous lanolin	10 parts
	Benzoinated lard	20 "
	Rose water	30 "

Its uses are the same as those of cold cream.

Ungt. refrigerans aquæ calcis:

℞	Anhydrous lanolin	10 parts
	Benzoinated lard	20 "
	Lime water	30 "

Useful for burns.

Ungt. refrigerans plumbi sub-acetatis:

℞	Anhydrous lanolin	10 parts
	Benzoinated lard	20 "
	Solution of sub-acetate of lead	30 "

Uses: The same as Goulard's cerate.

Ungt. refrigerans zinci:

℞	Anhydrous lanolin	10 parts
	Zinc ointment	20 "
	Rose water	30 "

Used in place of zinc ointment.

Ungt. refrigerans ichthyoli:

℞	Anhydrous lanolin	10 parts
	Benzoinated lard	20 "
	Distilled water	24 "
	Ichthyol	6 "

Methyl Phenacetin as an Anodyne.

The *Druggists' Circular*, September, 1890, says: The introduction of the methyl group in the place of the residuary atom of hydrogen of the amide group of acetanilid produces the anodyne compound known as exalgine. This fact having been observed it was thought probable that a similar substitution in phenacetin, which is oxyethylacetanilid, might also develop anodyne properties. Experiments carried out to that end indicate that the theory is correct, the introduction of either an ethyl or a methyl group producing a compound possessing marked anodyne properties; the methyl compound being the more active of the two.

Benzosol.

The *Druggists' Circular*, September, 1890, says: Benzosol is the name applied to a compound which may be termed, systematically, pyrocatechin-monomethyl ether. It is looked upon as a derivative of guaiacol in which hydroxyl is replaced by the benzoyl group. This ether is recommended for use in phthisis as being more agreeable to the taste than guaiacol, and it is said to be also less apt to set up local irritation.

Aristol and Collodion.

A good formula for aristol and collodion is the following:

℞	Aristol	ʒi
	Ether	fʒi ℈i
	Collodion	fʒi

NEWS.

—Typhoid fever is said to be still prevailing in Bethlehem, Pa.

—Dr. H. B. Allyn has removed to No. 310 North Fortieth street, Philadelphia.

—Diphtheria and dysentery are said to have prevailed recently in Stroudsburg, Pa.

—It is reported from Alabama in the newspapers of September 19, that a woman 115 years old was living and well near Greenville, in that State.

—Dr. William N. Angney has brought suit against the city of Philadelphia to recover $10,000, for damages sustained by his property by the bursting of city water pipes in February, 1890.

—A rumor of the occurrence of cases of cholera in Carroll county, Ohio, was sent out September 16. It proved, like all other such rumors of late in this country, to be founded upon error and alarm.

—Dr. Miesterfeld, of Philadelphia, was recently accused of felonously assaulting a young woman who came to him for professional services. Miesterfeld advertises in the daily papers as a curer of special diseases.

—A queer story comes from Chicago that a man named Johnstone has been doing what

he calls "mind-reading." Some of his performances would be very remarkable if they were honestly done and accurately reported.

—It is reported in the newspapers, September 19, from Flushing, L. I., that a woman was living there in good health and good memory who celebrated her 105th birthday (was 104 years old) September 18.

—Dr. E. M. Ferris, a wealthy resident of Brookline, near Boston, committed suicide at his Boston office, September 16, by shooting himself through the head with a revolver. The cause of the deed is attributed to anxiety and overwork.

—The Association of Dental Surgeons, in Baltimore, has decided that no dentist is obliged to answer the questions incorporated in the blanks entitled "Statistics of Manufacturers," which dentists have been requested by Census officers to fill, since, as professional men, they cannot be classed among manufacturers.

—A number of prominent physicians of Philadelphia have united in a protest against the contemplated extension of the Department for the Insane at the Blockley Almshouse (Philadelphia Hospital), on the ground that the site is unfit for the proper care of the large number of patients there, and that the buildings are improperly planned.

—Mrs. Frances Moore Constantine, the oldest resident of Montgomery county, Pa., and probably of the entire State, died September 15, 1890, at the residence of her son in West Manayunk at the advanced age of 105 years and 6 months. Mrs. Constantine was born near Radnor on March 16, 1785. Her parents in their time were well-known residents of that section.

—Dr. Munroe Bond died in Philadelphia, September 15, 1890, aged thirty-eight years. He was a native of New Hampshire, and came to Philadelphia to attend the lectures at the College of Pharmacy, from which he was graduated in 1876. From 1876 to 1879 he carried on a drug store at Sixteenth and Race streets, and in the latter year was graduated in medicine from Jefferson College.

—Dr. Mossell, whose accusation was mentioned in the REPORTER, September 13, has has been exonerated of the charge brought against him. His conduct and evidence and that of well-known physicians who examined the woman who prosecuted him satisfied the magistrate before whom he appeared that he had done nothing but what an honest physician might do in the exercise of his judgment.

—Dr. Horace Evans died in Philadelphia, September 15, 1890. He was born in this city in 1807 and was graduated from the literary and medical departments of the University of Pennsylvania. His association with noted men of the past made him an authority on the history of the past, especially on the genealogies of old families. His residences on Walnut street and Queen lane are relics of the past. The latter was erected in 1730, and was the headquarters of the British cavalry during the battle of Germantown.

OBITUARY.

SILAS HAMILTON DOUGLAS, M. D.

Dr. Silas Hamilton Douglas, one of the founders of the Department of Medicine and Surgery of the University of Michigan, and for twenty-eight years a member of the Faculty, died at Ann Arbor, August 26, 1890, at the age of seventy-four years. At a meeting of the Faculty, held September 4, 1890, a minute was adopted testifying to the respect and regard in which Dr. Douglas had been held. This minute states that he was one of a very few strong men of steady purpose, who opened a way for medical education in that State, and from the first determined that broader foundations should be laid for the support of medical learning. Elected as Professor of Chemistry in the University on August 5, 1846, he was soon active in those movements which obtained the adoption, by the Board of Regents, of a plan for the organization of a department of medicine, presented by Dr. Zina Pitcher and others, January 17, 1848. In the beginning of the medical school he held for a time the chair of Materia Medica in addition to that of Chemistry. Early in the building of the foundations Professor Douglas set out to provide for the laboratory method of study, then nearly unknown in medical schools. When Dr. Douglas had labored in the University for ten years, on May 8, 1856, the Board of Regents made provision for the erection of a building under his charge to serve as a chemical laboratory. This is one of the most complete and efficient in the country. To this and its development Professor Douglas gave the best years of his life. To him and his early associates in medical education a great debt of gratitude is due.